



**CCNETWORK**   
Comprehensive Center Network

REGION 2  
Connecticut  
New York  
Rhode Island

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Comprehensive Center Network

REGION 1  
Maine  
Massachusetts  
New Hampshire  
Vermont

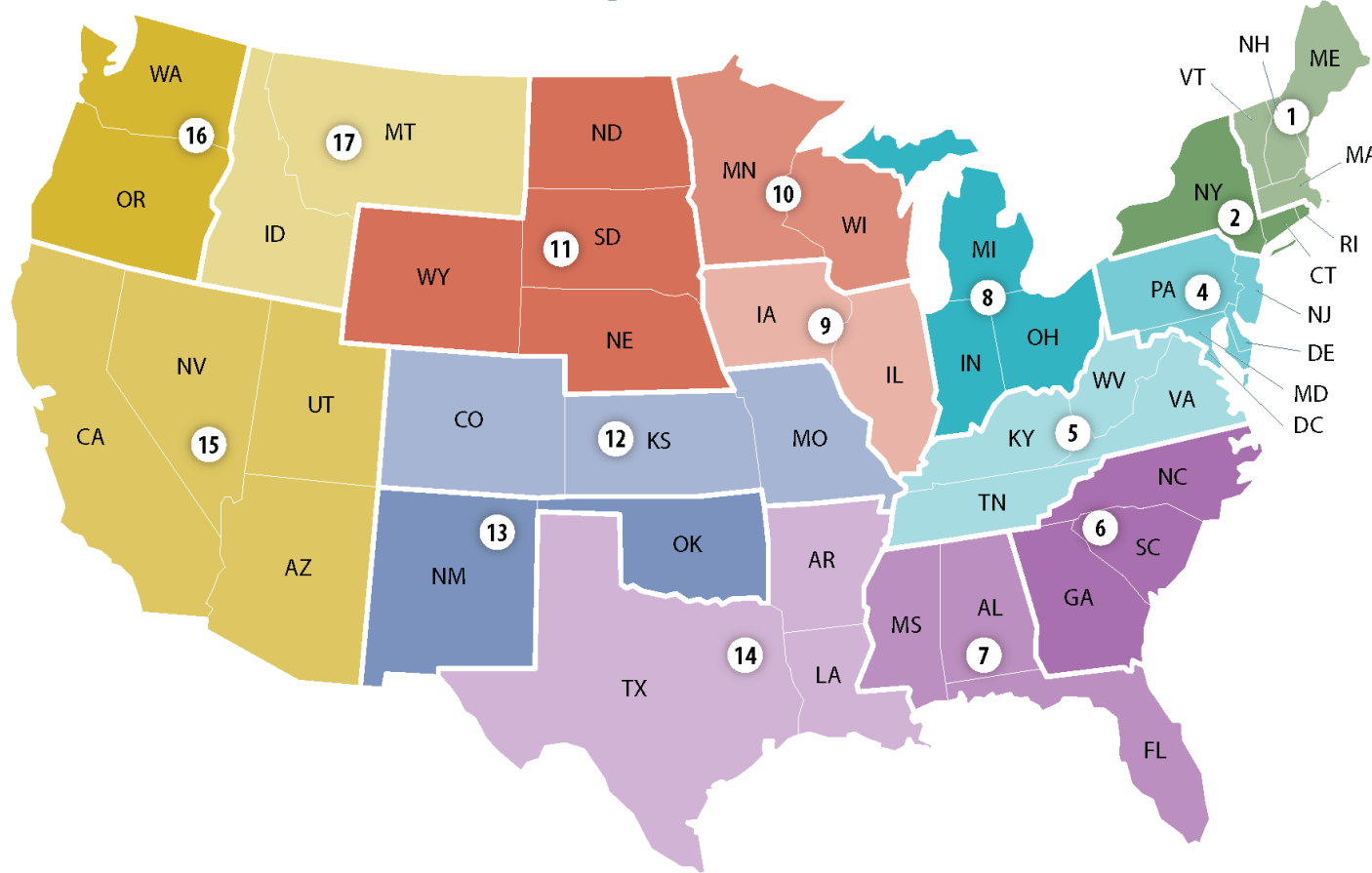
# Regions 1 and 2 Comprehensive Centers Virtual Café

Identifying Data to  
Strengthen the Educator  
Workforce

**October 12, 2022**

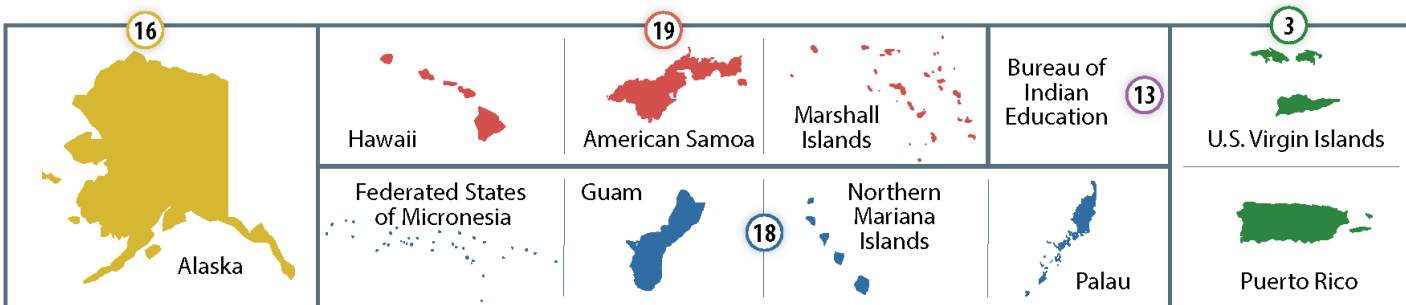
# **Welcome and Framing the Session**

**19 Regional Centers**



**Region 1**  
Maine  
Massachusetts  
New Hampshire  
Vermont

**Region 2**  
Connecticut  
New York  
Rhode Island



# What We Do

Regional Comprehensive Centers provide capacity building technical assistance and other support to the states in their region to identify, implement, and sustain effective evidence-based practices that support improved educator and student outcomes.



# Three-Part Virtual Professional Learning Series



**Session 1:** Identifying Data to Strengthen the Educator Workforce (October 2022)



**Session 2:** Using Data to Strengthen the Educator Workforce (January 2023)



**Session 3:** Leveraging Educator Workforce Data to Inform Policy and Procedures (March 2023)

# Session 1 Objectives

- Engage in discussions about data that are critical in understanding your educator workforce system.
- Learn from Colorado on approaches to obtain supply and demand data.
- Share tools that states can use to identify possible educator workforce data.



**Does your state have  
an educator shortage?**

## Is there a teacher shortage? It's complicated

Source: [CNN](#)

**School districts across the country under the wire to hire hundreds of teachers before school year starts**

Source: [Fox News](#)

**The teacher shortage problem is bad. Really bad.**

Source: [Politico](#)

America's new "national teacher shortage" is neither new nor national

Source: [The Economist](#)

**'Never seen it this bad': America faces catastrophic teacher shortage**

Source: [The Economist](#)

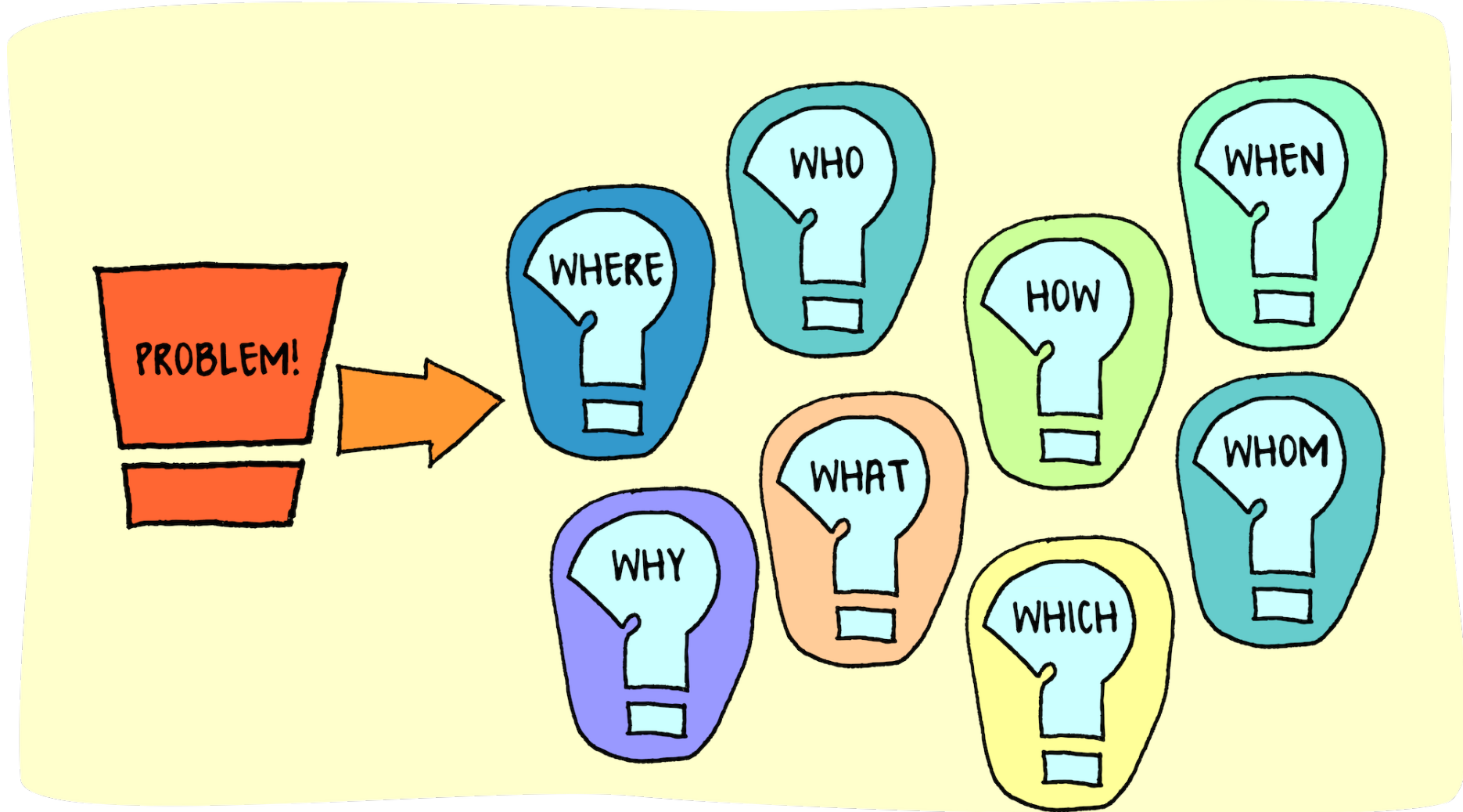
**PROOF POINTS: Researchers say cries of teacher shortages are overblown**

Source: [The Hechinger Report](#)



What *is* an **educator shortage**?





Source: [Introduction to Problem Solving Skills](#), CC BY 4.0

# WE FIXED OUR SCHOOL'S TEACHER SHORTAGE

Source: [The New Yorker](#)

Dear Parents and Guardians,

I'm sure you all have heard about this little “teacher shortage” plaguing the country. As the school principal, I promise that you have nothing to worry about. Though many members of our staff have left citing burnout, the state has relaxed certification requirements for teaching, and that means we have several exciting replacements to announce—a few of whom might be even better than some crusty, old licensed educator with a vested interest in the success of your children.

We are committed to maintaining our strong mathematics and science departments. Chemistry will now be an applied class on skin-care regimens taught through a student-led series of trial and error. (If you have any leftover or sample products, please contact me about donating them.) Geometry will be taught by Jeremy, a Trader Joe's employee who bags groceries like it's a game of Tetris. He also will be co-heading our physics department, alongside the concept of gravity, making us the first school in U.S. history with theory-inclusive staffing.

# Identifying Data Sources



# Why Collect Educator Workforce Data?

Educator workforce data provides state leaders information on

- whether there are shortages;
- determining shortages or needs geographically or by subject area;
- identifying opportunities to leverage;
- determining the appropriate solution, targeted to the right place;
- determining where in the educator pipeline to strengthen;
- strengthening alignment between supply and demand needs;
- identifying inequities in access to quality teachers; and
- prioritizing where to diversify the educator workforce.

# Activity: Exploring Data and Questions

- In breakout groups, discuss the following:
  - > What questions do you want to be able to answer with your educator workforce data?
  - > What data do you need to answer each question?
- Someone from R1CC or R2CC will take notes of your discussion in a Google Doc.

**Session 1** Identifying Data to Strengthen the Educator Workforce

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**Region 1 & 2 CC Virtual Professional Learning Series**

*October 12, 2022*

**Breakout Session 1 - Exploring Data and Questions**  
**Instructions:** Each breakout room will brainstorm and discuss the guiding questions. Someone from Region 1 & 2 CC will take notes to capture your responses in the table below for your breakout room.

**Room 1**

What questions do you want to be able to answer with your educator workforce data?	What data do you need to answer each question?

CCNETWORK Comprehensive Center Network STATE  
Massachusetts STATE  
New Hampshire  
Vermont STATE  
Connecticut STATE  
New York STATE  
Rhode Island 1

# Resource: Educator Workforce Data Repository

- Categorizes essential questions and data to understand your educator workforce system
- Includes aspirational data sources that states may not currently collect

**Resource** Identifying Data to Strengthen the Educator Workforce

### Educator Workforce Data Repository

This handout outlines various types of data that state education agencies (SEAs) can consider collecting to better understand their educator workforce system. It includes key questions that SEAs may want to be able to answer about their educator workforce system and the corresponding data sources needed for answering such questions. The questions and data sources are categorized to explore various aspects of the educator workforce system. There may be additional questions that states would like to explore and other data sources needed beyond this list.

Category	Questions	Data sources
Demand	<p><b>What are the status and longitudinal patterns of educator attrition, retention, vacancy, and/or mobility in districts and schools?</b></p> <ul style="list-style-type: none"><li>• Which districts/schools have the greatest concentration of educators leaving or moving?</li><li>• What is the status and patterns of educator turnover, retention, vacancy, and/or mobility for each type of educator (e.g., teacher, leader, paraprofessional)? How does it compare across districts and schools?</li><li>• What are the characteristics or patterns of educators who are leaving, moving, or staying (e.g., higher performing, experience level, race/ethnicity)</li><li>• Are students receiving the appropriate level of support and services (e.g., resulting from changes in positions or class size)</li></ul>	<ul style="list-style-type: none"><li>• Districts</li><li>• Schools by type (i.e., traditional, charter)</li><li>• Attrition rate by educator type (e.g., teachers, principal, special service provider), by district and school level and across time</li><li>• Retention rate by educator type (e.g., teachers, principal, special service provider), by district and school level and across time</li><li>• Vacancy rate by educator type (e.g., teachers, principal, special service provider), by district and school level and across time</li><li>• Mobility rate by educator type (e.g., teachers, principal, special service</li></ul>

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CONNECTED LEARNERS | CONNECTED COMMUNITIES | CONNECTED LEADERS

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**COLORADO**  
Department of Education

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# Colorado Educator Workforce Pipeline Data Stories

Carolyn Haug

Director of Research and Impact, Educator Talent

Contact: [Haug\\_C@cde.state.co.us](mailto:Haug_C@cde.state.co.us)



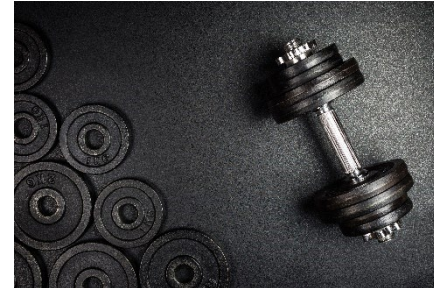


# What made it possible to provide accessible and informative workforce data?

➤ Authority



➤ Implementation



➤ Leveraging opportunities





# Authority



## **Authority through legislation was critically important for the department to provide rich workforce tools**

- Unique statewide educator identifiers
- Educator shortage information
- Individual educator candidate enrollment and completion records
- Individual educator evaluation records based on statewide evaluation system
- Statewide administration of a school climate and culture survey





# Implementation



Mechanisms to collect our educator supply and demand data needed to implemented.

## **Important data the department needed to collect include the following:**

- School district hiring needs by content area and geographical location
- Educator preparation program (EPP) graduates by content area; this existed for traditional EPPs but not for alternative licensure EPPs
- Educator mobility, attrition, and retention
- Educator performance
- School climate and culture
- Additional local economic data available from the American Community Survey





# Leveraging Opportunities

With limited resources at the department, we leveraged existing data sources, existing data collection processes, and opportunities for external partnerships to provide the capacity to develop user-friendly ways to make workforce information understandable and accessible.

- Human resources data was an existing data source.
- The Educator Shortage Survey is administered in tandem with the human resources data collection to streamline collection for districts/Boards of Cooperative Educational Services (BOCES).
- Support of the Region 12 Comprehensive Center and Regional Educational Laboratory Central





# Collecting Critical Supply Data

## EPP Enrollment/Completer File

- EPPs (traditional and alternative) submit this annually
- Individual records of future educators enrolled and completed by endorsement area
- Initial licensure or added endorsement is differentiated
- Historical purpose: to report the number of completers in each teaching area.
- Current purpose: In addition, to track new teachers into the workforce and monitor their licensure test passage rates, job performance, and retention.



# Workforce Supply Data

- Lessons Learned:
  - Collaborate with a stakeholder advisory group in the development phase.
  - Obtaining timely data remains our biggest challenge.
  - Interagency data sharing can be complicated. In Colorado, this project requires close collaboration between the Colorado Department of Education and the Colorado Department of Higher Education.
- EPP Production of New Educators:
  - Project overview and summary information: <https://www.cde.state.co.us/educatortalent/edprepprogram-report>
  - Interactive dashboards: <https://www.cde.state.co.us/code/eppreport>





# Collecting Critical Demand Data

## Human Resources Employment File:

- Districts submit this annually
- Analyzed year-to-year, generates turnover/retention data
- Reveals where EPP completers are teaching/working
- Turnover and other staff statistics annual reports:  
<https://www.cde.state.co.us/cdereval/staffcurrent>



# More Demand Data: Educator Shortage Survey

- Districts submit annually
- Collected in FTE and endorsement/teaching area, such as the following:

	Question 1: Total Positions in FTE to Hire	Question 2: Vacant Positions in FTE at Beginning of School Year	Question 3: Positions in FTE Filled with Long Term Subs	Question 4: Positions in FTE Filled by Retired Educators	Question 5: Positions in FTE Filled by Alternative Licensure Candidate/ Program	Question 6: Positions in FTE Filled by Emergency Candidates	Question 7: Unfilled Positions in FTE
Agriculture And Natural Resources							
Business/Marketing							
Culturally And Linguistically Diverse Education							
Dance							
Drama Theater Arts							
Early Childhood Education							







# Educator Shortage Survey Results

- Widely used information:
  - Stipend eligibility, loan forgiveness eligibility, grants
  - Colorado uses the U.S. Department of Education Teacher Shortage Areas survey guidelines to determine our shortage list
- In 2021–22, we documented the following:
  - Twenty percent of *open* teaching, 9% of *open* special service providers (SSP), and 3% of *open* principal positions were filled by a shortage mechanism.
  - Eight percent of *open* teaching, 17% of *open* SSP, and 3% of *open* principal positions were not filled at all.





# Educator Shortage Survey

## *Shortage survey:*

- *PDF of survey:*

<https://www.cde.state.co.us/datapipeline/educatorshortagesurveyscreenshotnov2021>

- *Project overview and summary information:*

<https://www.cde.state.co.us/educatortalent/edshortagesurveyresults>

- *Interactive dashboard:*

<https://www.cde.state.co.us/educatortalent/coloeducatorshortagesurveyresultsdashboard>



# Collecting Critical Performance Data: Educator Evaluation File

- Districts submit annually.
- A new process beginning in spring 2023 will allow for more complete and timely data at the state level.
- We provide four publicly reported metrics and an additional four privately reported metrics.
- *Educator effectiveness metrics:*
  - *Project overview:*  
<https://www.cde.state.co.us/educatoreffectiveness/eemetrics>
  - *Interactive dashboards:* <https://www.cde.state.co.us/ee-metrics>





# Bringing the Workforce Data All Together: Workforce Pipeline GIS Project

- Why GIS maps? Place matters.
- Educational opportunities can be impacted by community challenges outside the educational system.
- GIS maps bring geographic and economic contexts to bear on educational indicators and outcomes.





# One Example of Our GIS Maps

## Strengthening the Colorado Educator Workforce Pipeline

- Educator Mobility/Attrition
- Labor Market
- Incentive Programs
- Teacher Supply
- District/School Performance
- Student Populations
- Working Conditions
- Teacher Diversity

### What is the relationship between hard-to-fill positions and labor market trends?

**District Unfilled Positions:**

On  Off

**District Shortage Mechanisms:**

On  Off

\*\*\*All\*\*\*

**Endorsement Area**

All Endorsement Areas

**Unfilled Positions (per 100 students):**

0 2.4

**Filled by All Shortage Mechanisms (per 100 students)**

0 7

**Median Household Income:**

\$0 \$126,089

**Average Teacher Salary:**

\$0 \$85,687

**Unemployment Rate (% of civilians 16 years and older not in the labor force):**

0 19.9

Sources: Colorado Department of Education, SY2021-22 and American Community Survey (ACS) 5-year Data (2016-2020)

**Instructions for Filters:**

**District Unfilled Positions:** choose to see district-level unfilled positions.

**District Shortage Mechanism:** choose to see district-level shortage mechanisms used. Change the type of shortage mechanism used in the drop-down menu directly underneath.

**Endorsement Area:** select to see unfilled positions and/or shortage mechanism used by endorsement area.

**Sliders:** filter the selected labor market data displayed on the map based on the minimum and maximum value of the slider variable.

**District-Level Unfilled Positions by Endorsement Area (per 100 students) (SY 2021-22):**

Low rate of unfilled positions (per 100 students) High rate of unfilled positions (per 100 students)

**District-Level Shortage Mechanisms Used (per 100 students) (SY 2021-22):**

Low rate of shortage mechanism used (per 100 students) High rate of shortage mechanism used (per 100 students)

■ = no data

Legend Detailed Legend

Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS

**Definition of Unfilled Positions:**

The number of positions that were not able to be hired for and therefore remained vacant during the school year. This data is collected annually statewide as part of the [Educator Shortage Survey](#).

**Definition of Shortage Mechanisms:**

The number of positions filled by hiring a long-term substitute, retired teacher, alternative licensure program candidate, or emergency licensure candidate. This data is collected annually statewide as part of the [Educator Shortage Survey](#).

**Educator Mobility and Attrition Rate per 100 Students:**

By reporting this metric per 100 students, a small district with 100 students and 10 teachers leaving would have a rate of 10 while a larger district with 10,000 students and 1000 teachers leaving would also have a rate of 10.




# Workforce Pipeline GIS Project

*Bringing it all together in the Colorado educator workforce pipeline GIS maps:*

- *Project overview: <https://region12cc.org/gis-map-exploration-and-application-resources/>*
- *Interactive GIS maps: <https://azusearcgis1.air.org/portal/apps/MapSeries/index.html?appid=14e159956ea84cb896d9de9831a4cd9a>*



# Questions to Determine the Current State



**What data are currently available? Are they disaggregated by district?  
By certification area?**



**What data do the state currently make publicly available?**

**How are we making the data accessible and actionable?**



# Examples of Colorado Data Tools

- *EPP Production of New Educators:*
  - Project overview and summary information: <https://www.cde.state.co.us/educatortalent/edprepprogram-report>
  - Interactive dashboards: <https://www.cde.state.co.us/code/eppreport>
- *Turnover and other staff statistics annual reports:* <https://www.cde.state.co.us/cdereval/staffcurrent>
- *Shortage survey:*
  - Project overview and summary information: <https://www.cde.state.co.us/educatortalent/edshortage-surveyresults>
  - Interactive dashboard: <https://www.cde.state.co.us/educatortalent/coloeducatorshortagesurveyresultsdashboard>
- *Educator effectiveness metrics:*
  - Project overview: <https://www.cde.state.co.us/educatoreffectiveness/eemetrics>
  - Interactive dashboards: <https://www.cde.state.co.us/ee-metrics>
- *Bringing it all together in the Colorado educator workforce pipeline GIS maps:*
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  - Interactive GIS maps:  
<https://azusearcgis1.air.org/portal/apps/MapSeries/index.html?appid=14e159956ea84cb896d9de9831a4cd9a>



# State Team Planning and Debrief

# SEA Debrief/Planning

- What data sources will you add/change?
- How will you use these data sources to guide discussions and decision making at your SEA and how will it support LEAs?

# Three-Part Virtual Professional Learning Series



**Session 2:** Using Data to Strengthen the Educator Workforce (January 2023)



**Session 3:** Leveraging Educator Workforce Data to Inform Policy and Procedures (March 2023)

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